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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Hakan I Karlsson

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04/22/2003

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EXAMINER

LEE, SHUN K

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 04/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/807,728

Applicant(s)

KARLSSON ET AL.

Examiner

Shun Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6 and 10 is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-9 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>11</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Information Disclosure Statement

1. It is noted that a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed (SE 465 983) that is not in the English language is located on page 6, lines 2-5 of the specification.

Specification

2. The incorporation of essential material in the specification by reference (first paragraph on pg. 6) to a foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. See *In re Hawkins*, 486 F.2d 569, 179 USPQ 157 (CCPA 1973); *In re Hawkins*, 486 F.2d 579, 179 USPQ 163 (CCPA 1973); and *In re Hawkins*, 486 F.2d 577, 179 USPQ 167 (CCPA 1973).

Claim Objections

3. Claim 3 is objected to because of the following informalities: "a" in line 2 should probably be —an—. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in th

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 8 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It is noted that adjusting means is disclosed (pg. 4, lines 19-22) as positioning equipment such as a pressurized air-driven piston rod 56. Further, it is noted that specification discloses (pg. 5, lines 1-4) that stop devices 66, 68 limit upper glass plate 46. However, the specification does not describe stop elements to limit the movement of the adjusting means.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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8. Claims 1, 3, 4, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coates (US 2,690,695) in view of Saunders (US 3,332,316) and Simms *et al.* (US 4,171,916).

In regard to claims 1 and 9, Coates discloses (Fig. 1) a device comprising:

- (a) a measuring cell (10);
- (b) a measuring field (43) defined between two limiting surfaces of the cell (10), and the measuring field (43) have circular limiting surfaces (see Figs. 1 and 3); and
- (c) a means (21) for adjusting the width of the measuring field (43);

wherein the limiting surfaces have two opposing, transparent sections (16, 23) that allow illumination through the flowing suspension passing through and measurement by optical means, and

wherein the measuring cell (10) having an inlet opening (44) intended for the whole of the suspension flow and an outlet opening (44) intended for the whole of the suspension flow.

The device of Coates lacks that the inlet opening is positioned centrally with regard to one limiting surface to obtain a radial suspension flow, with a pressure that diminishes in a radial direction and is used to measure fiber properties in a flowing suspension.

Simms *et al.* teach (column 1, line 6 to column 2, line 9) it is known in the art to obtain optical measurements in order to determine consistency of a fiber suspension.

Saunders teaches (column 2, lines 45-50) to position a filling tube for a variable optical path length device entirely within the window at any desired position in order to avoid contact between the sample and cell members. It should be noted that it is inherent that

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a centrally positioned inlet opening in a circular limiting surface has circular symmetry and thus the fluid flow out of the inlet opening has a radial flow (from circular symmetry), with a pressure that diminishes in a radial direction (from well known hydrodynamic considerations, *i.e.*, fluid flows from a high pressure region to a low pressure region). Therefore it would have been obvious to one having ordinary skill in the art to position centrally the inlet opening in the transparent section (*i.e.*, one of the limiting surfaces) in the device of Coates, in order to avoid contact between a sample and cell members and to obtain optical measurements in order to determine consistency of a fiber suspension.

Applicant is advised that should claim 1 be found allowable, claim 9 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

In regard to claim 3 which is dependent on claim 1, Coates also disclose (Figs. 1 and 3) that the periphery of the other limiting surface (of window 16) extends to reach an outer wall (11, 12) of the measuring cell, and that an intermediate space is defined between the periphery of the one limiting surface (of window 23) and the outer wall (11, 12) to form a peripheral field.

In regard to claim 4 which is dependent on claim 1, the device of Coates lacks an explicit description that the distance between the limiting surfaces is adjustable within the range of 0.5-5 mm. However, Coates also discloses (column 3, lines 56-58) that the

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thickness of the sample can be adjusted within the limits required. Simms *et al.* teach (column 4, lines 30-44) the thickness (W in Fig. 1) determine the range of consistency that can be measured. Therefore it would have been obvious to one having ordinary skill in the art to provide the necessary limits (e.g., 0.5-5 mm) in the device of Coates, in order to be able to measure a desired range of fiber suspension consistency.

In regard to claim 8 which is dependent on claim 1 in so far as understood, the device of Coates lacks that an outer wall of the measuring cell is provided with stop elements to limit the movement of the adjusting means and thus one of the limiting surfaces in an upper and a lower position. Coates also discloses (column 3, lines 56-58) that the thickness of the sample can be adjusted within the limits required. Simms *et al.* teach (column 4, lines 30-44) the thickness (W in Fig. 1) determine the range of consistency that can be measured. Therefore it would have been obvious to one having ordinary skill in the art to provide stop elements for the necessary limits in the device of Coates, in order to be able to measure a desired range of fiber suspension consistency.

9. Claims 2, 7, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coates (US 2,690,695) in view of Saunders (US 3,332,316) and Simms *et al.* (US 4,171,916) as applied to claim 1 above, and further in view of Renard *et al.* (US 4,837,446).

In regard to claim 2 which is dependent on claim 1, the modified device of Coates lacks that an inlet tube (42) for directing and stabilizing the suspension flow is connected to the inlet opening (38) and has a length that is greater than its width.

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Connections to flow cells are well known in the art. For example, Renard *et al.* teach (Fig.) that a tubing (14) is connected to the inlet of a flow cell (16) in order to provide the sample from a source (10) to the flow cell (16). It is inherent that the length of the tubing (14) is sufficiently long to connect the source (10) to the flow cell (16). Therefore it would have been obvious to one having ordinary skill in the art to provide a tube having a length that is greater than its width connected to the inlet opening in the modified device of Coates, in order to deliver a sample from a distant sample source.

In regard to claim 7 (which is dependent on claim 1) and claim 11 (which is dependent on claim 2), the modified device of Coates lacks that the area (A_t) of the inlet tube across the direction of flow is greater than the area (A_m) of the measuring field across the direction of flow immediately after the inlet opening. Renard *et al.* teach (column 4, lines 18-28; Fig.) that the flow cell (16) is narrower than the tubing (14) and that the flow cell (16) should be narrow enough to insure flow of single fibers so as to enable measurement of single fibers. It should be noted that if R_t is the inner radius of the tube, w is measuring field width, and R_i is the radius of the inlet opening, then $w \ll R_t$, $A_t = \pi R_t^2$, and $A_m = 2\pi R_i w$. Since the tube is connected to the inlet opening, $R_t = R_i$ and $A_t < A_m$. Therefore it would have been obvious to one having ordinary skill in the art to provide a narrow width measuring field with the area of the inlet tube across the direction of flow is greater than the area of the measuring field across the direction of flow immediately after the inlet opening in the modified device of Coates, in order to insure a flow of single fibers so as to enable measurement of single fibers.

Allowable Subject Matter

10. Claims 6 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter: the instant application is deemed to be directed to a nonobvious improvement over the invention patented in US Patent 2,690,695. The improvement comprises in combination with other recited elements, that one of the limiting surfaces can rotate with the aid of a motor.

Response to Arguments

12. Applicant's arguments filed 31 January 2003 have been fully considered but they are not persuasive.

Applicant argues (eighth paragraph on pg. 6 of remarks filed 31 January 2003) that the cited references teaches away from a centrally positioned inlet opening since the cited references do not want to obscure the radiation path. Examiner respectfully disagrees. First it should be noted that applicant has failed to provide any explanation of the extent and location of the radiation path relative to the center of the limiting surfaces (*i.e.*, applicant is making an assumption the radiation path is located at the center of the limiting surfaces). Thus this argument that a centrally positioned inlet opening would obscure the radiation path relies on an unsupported unstated assumption that the radiation path is located at the center of the limiting surfaces. Moreover, it is noted that Saunders states (column 2, lines 46-53) that "In FIG. 2, filling tube

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30 passes through a portion of window 27. It will be appreciated that window 27 may be drilled or otherwise cored to accommodate filling tube 30 entirely therewithin where desired, for example, where it is necessary to avoid contact between the sample and cell members 34 and 35. Also, windows 27 and 28 in FIG. 2 may only partially fill their respective openings within the concept of this invention". The key phrase is "where desired". Thus it is clear that a filling tube can be located centrally within window 27.

In response to applicant's argument (first two paragraphs on pg. 7 of remarks filed 31 January 2003) that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (*i.e.*, simultaneous measurements with at least two cameras) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shun Lee whose telephone number is (703) 308-4860. The examiner can normally be reached on Tuesday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (703) 308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

SL
April 15, 2003


DAVID PORTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800